



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/629,163	07/31/2000	HANY M. AZIZ	105433	4806

7590 08/05/2002

OLIFF & BERRIDGE PLC
P O BOX 19928
ALEXANDRIA, VA 22320

EXAMINER

ZIMMERMAN, GLENN

ART UNIT	PAPER NUMBER
----------	--------------

2879

DATE MAILED: 08/05/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/629,163

Applicant(s)

AZIZ ET AL.

Examiner

Glenn Zimmerman

Art Unit

2879

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-49 is/are pending in the application.
- 4a) Of the above claim(s) 29-49 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☒ Claim(s) 2 is/are objected to.
- 8) ☒ Claim(s) 1-49 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 July 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Election/Restrictions

Applicant's election without traverse of Group I claims 1-28 in Paper No. 4 is acknowledged.

Information Disclosure Statement

The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

Claim Objections

Claim 2 is objected to because of the following informalities: In claim 2 line 2, the examiner suggests changing "an" to "the". Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1-28 are rejected under 35 U.S.C. 102(e) as being anticipated by Epstein et al. U.S. Patent 6,235,414 B1.

Regarding Claim 1, Epstein et al. disclose an organic light emitting device, comprising : an anode (**electrode (ITO) ref. 3**); a cathode (**electrode (Al) ref. 1**) ; and a light emission region (**emissive polymer(s) Fig. 1b ref. 5**) that emits light disposed between the anode and cathode, the light emission region including an organic light emitting material (**polyphenylene or polyfluorene and blends col. 4 lines 10-25**) ; wherein the organic light emitting device is in an annealed condition.

Claim 1 is a product-by-process claim and the particular process "in an annealed condition" has not been given patentable weight.

Claims 2 and 3 are rejected for the same reason as claim 1.

Art Unit: 2879

Claim 2 is a product-by-process claim and the particular process "formed by annealing an organic light emitting device at a temperature for a period of time" has not been given patentable weight.

Claim 3 is a product-by-process claim and the particular process "annealed at a temperature and for a period of time" has not been given patentable weight.

Regarding claim 7, Epstein et al. disclose the organic light emitting device of claim 1, wherein the light emission region comprises:

A mixed region including a mixture of a hole transport material and an electron transport material (**col. 3 lines 65-67; col. 4 lines 1-25**); and at least one of (i) a hole transport region between the anode and the mixed region (**polyaniline redox polymer layer ref. 6; col. 4 lines 26-32 and 60-67**); and (ii) and electron transport region (**polyaniline acid redox polymer layer ref. 7; col. 5 lines 1-9**) between the cathode and the mixed region; wherein at least one of the hole transport region, the electron transport region and the mixed region emits light.

All the transport layers are made of polyaniline so they all emit light.

Claims 4-6 are rejected for the same reason as claim 7.

Regarding claim 8, Epstein et al. disclose the organic light emitting device of claim 7, wherein the light emission region comprises (**polyphenylene or polyfluorene and blends col. 4 lines 10-25**) a material selected from the group consisting of polyphenylenes, polyphenylvinylenes, polyfluorenes, polypyrroles, polyanilines and derivatives thereof.

Claims 9-12 are rejected for the same reason as claim 8.

Art Unit: 2879

Regarding claim 13, Epstein et al. disclose the organic light emitting device of claim 7, wherein the light emission region comprises a material selected from the group consisting of metal oxinoids (**AlQ₃**), aromatic tertiary amines, indolocarbazoles, triazines, stilbenes, anthracenes, oxadiazole metal chelates, porphyrins, and derivatives thereof (**col. 4 lines 40-55**).

Claims 14-17 rejected for the same reason as claim 13.

Regarding claim 18, Epstein et al. disclose the organic light emitting device of claim 7, wherein the hole transport material is selected from the group consisting of aromatic tertiary amines and indolocarbazole compounds (**4'-diamine col. 4 lines 40-55**), and the electron transport material is selected from the group consisting of metal oxinoids (**AlQ₃**), triazines, stilbenes, oxadizole, metal chelates and derivatives thereof (**col. 4 lines 40-55**).

Claims 19-21 are rejected for the same reason as claim 18.

Regarding claim 22, Epstein et al. disclose the organic light emitting device of claim 22, wherein the hole transport material is a naphtyl-substituted benzidine derivative or indolocarbazole compound (**4'-diamine; N'-diphenyl-N; N'-bis(3-methylphenyl)-1; col. 4 lines 40-55**), and the electron transport material is tris (8-hydroxylquinoline) aluminum (**AlQ₃ ; col. 4 lines 40-55**) or bis(8-hydroxyquinolato)-4-phenylphenolato)aluminum.

Claims 23-25 are rejected for the same reason as claim 22.

Regarding claim 26, Epstein et al. disclose the organic light emitting device of claim 1, wherein the device emits light having a wavelength of from about 400 nm to

Art Unit: 2879

about 700 nm. It is the position of the examiner that the claimed functional language "wherein the device emits light having a wavelength of from about 400 nm to about 700 nm" is inherent to the claimed structure. See the instant specification.

Regarding claim 27, Epstein et al. disclose the organic light emitting device of claim 1, wherein the device operates under AC or DC driving conditions (**col. 6 lines 5-10**).

Regarding claim 28, Epstein et al. disclose a display comprising at least one organic light emitting device according to claim 1 (**col. 3 lines 24-30; col. 2 lines 15-20**).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Aziz et al. U.S. Patent 6,392,339 B1 disclose Organic Light Emitting Devices Including Mixed Region.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Glenn Zimmerman whose telephone number is (703) 308-8991. The examiner can normally be reached on M-F.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on (703) 305-4794. The fax phone numbers

Art Unit: 2879

for the organization where this application or proceeding is assigned are (703) 308-7382 for regular communications and (703) 308-7382 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is n/a.


Glenn Zimmerman
August 1, 2002


NIMESHKUMAR D. PATEL
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800